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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,901	11/27/2002	Chin-Yuan Lin	AVIP0030USA	5302

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EXAMINER

ALLEN, STEPHONE B

ART UNIT PAPER NUMBER

2878

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/065,901	Applicant(s) LIN, CHIN-YUAN	
	Examiner Stephone B. Allen	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by U. S. Patent No. 6,455,834 to Fujimoto et al. (Fujimoto).

Fujimoto discloses an image sensor module comprising a body, an image sensor arranged within the body including a plurality of photosensitive units and transparent layer (constituted by an air layer sandwiched between the lens array and the photosensitive units) for covering the photosensitive units, the transparent layer having an upper surface (the portion defined by the lens body) away from the photosensitive units; and a lens array arranged on the image sensor and in close contact with the upper surface of the transparent layer, wherein a depth of focus of the lens array equals to a distance between the upper surface of the transparent layer and the photosensitive unit.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 4,689,652 to Shimada et al. (Shimada).

Shimada discloses an image sensor module comprising a body, an image sensor arranged within the body including a plurality of photosensitive units (column 4, lines 36-43) and transparent layer 54,56 for covering the photosensitive units, the transparent layer having an upper surface away from the photosensitive units; and a lens array 58 arranged on the image sensor and in close contact with the upper surface of the transparent layer, wherein a depth of focus of the lens array equals to a distance between the upper surface of the transparent layer and the photosensitive unit (Figures 5A, 11A, 12A).

Claim 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent Nos. 5,399,850 to Nagatani et al. (Nagatani) or 6,239,421 to Nagata et al. (Nagata).

With respect to claim 1, both Nagatani and Nagata disclose an image sensor modules comprising a body, an image sensor arranged within the body including a plurality of photosensitive units and transparent layer (constituted by an air layer sandwiched between the lens array and the photosensitive units) for covering the photosensitive units, the transparent layer having an upper surface (the portion defined by the lens body) away from the photosensitive units; and a lens array arranged on the image sensor and in close contact with the upper surface of the transparent layer,

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wherein a depth of focus of the lens array equals to a distance between the upper surface of the transparent layer and the photosensitive unit.

With respect to claim 2, both disclose a glass layer covering the lens array.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Patent No. 6,565,609 to Hattori.

Hattori discloses an image sensor module comprising a body, an image sensor arranged within the body including a plurality of photosensitive units and transparent layer (constituted by an air layer sandwiched between the lens array and the photosensitive units) for covering the photosensitive units, the transparent layer having an upper surface (the portion defined by the lens body) away from the photosensitive units; and a lens array arranged on the image sensor and in close contact with the upper surface of the transparent layer, wherein a depth of focus of the lens array equals to a distance between the upper surface of the transparent layer and the photosensitive unit.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al. (Shimada) in view of Nagata et al. (Nagata) or Nagatani.

Shimada, though silent as to the inclusion of a cover glass located above the lens array covering the lens array, inherently includes this feature, as the scanned object does not float on air. However, if not so, both Nagata and Nagatani disclose image sensor modules having a cover glass located above the lens array covering the lens. Hence, it would have been obvious for one of ordinary skill in the art to include this feature into Shimada as a means of protecting the lens array for dust or scratches or any other substance that would interfere with obtaining an accurate image of the object scanned.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al. (Shimada).

Shimada is silent as to the type of photosensitive unit used, i.e. color units. It would have been obvious for one of ordinary skill in the art to replace the photosensitive units of Shimada with that of units of specific colors in order to provide a color image of the scanned object.

Claim 4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,771,401 to Chen in view of Shimada et al. (Shimada).

With respect to claim 4, Chen discloses a film scanner for scanning a film, i.e. a transparent object, wherein a passageway is located above an image sensor module

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and a light source is located above the passageway. Chen fails to disclose an image sensor module as is presently claimed. Shimada discloses a scanning device comprising an image sensor module as claimed. It would have been obvious for one of ordinary skill in the art to modify Chen to include the sensor module of Shimada in order to provide for a more compact system that has a shortened optical path.

With respect to claim 6, the modified Chen is silent as to the type of photosensitive unit used, i.e. color units. It would have been obvious for one of ordinary skill in the art to replace the photosensitive units of the modified Chen with that of units of specific colors in order to provide a color image of the scanned object.

With respect to claims 7 and 9, the modified Chen is silent as to the inclusion of a drive mechanism for driving the film pass through the passageway. However, it is notoriously well known in the scanning art to provide driving features to the scanner to facilitate scanning more than one object without manually handling each object, and the inclusion of such, if not already present, into the modified Chen would have obvious for one of ordinary skill in the art to make in order to increase the speed of the scanning process.

With respect to claim 8, the inclusion of a moving mechanism for moving the sensor module to scan the film is an inherent feature of a scanning device.

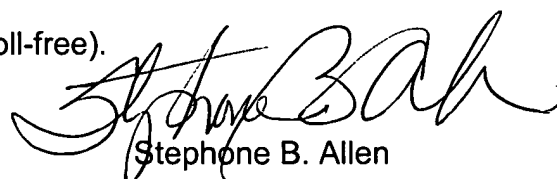
Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Shimada as applied to claim 4 above, and further in view of Nagata et al. (Nagata) or Nagatani.

The modified Chen is silent as to the inclusion of a cover glass located above the lens array covering the lens array. However, both Nagata and Nagatani disclose image sensor modules having a cover glass located above the lens array covering the lens. Hence, it would have been obvious for one of ordinary skill in the art to include this feature into the modified Chen as a means of protecting the lens array for dust or scratches or any other substance that would interfere with obtaining an accurate image of the object scanned.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephone B. Allen whose telephone number is (571) 272-2434. The examiner can normally be reached on Mon-Thurs from 0900-1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephone B. Allen

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Primary Examiner
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